

Claims

1. A digital document processing system, comprising  
an adaptable front end for receiving an input stream representing source data in one of  
a plurality of predetermined data formats and containing information representative of a  
5 visual image,  
interpreting module for interpreting said input stream to generate an internal  
representation of said visual display, and  
a rendering engine for processing said internal representation and for generating an  
output data stream suitable for driving an output device to present the visual image.

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2. A system according to claim 1, wherein said adaptable front end includes a process  
for monitoring a data stream and for identifying files in any of the formats from the set  
consisting of HTML, XML, PDF, DOC, RM, VRML and SGML.

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3. A system according to claim 1, wherein said source data defines the content and  
structure of a digital document, and wherein said internal representation data describes said  
structure in terms of generic objects defining a plurality of data types and parameters defining  
properties of specific instances of generic objects, separately from said content.

4. A system according to claim 1, further including a library of generic objects, said  
internal representation data being based on the content of said library.

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5. A system according to claim 1, including a parsing module adapted to generate an  
object and parameter based representation of the image.

6. A system according to claim 1, further including a shape processing module adapted  
to receive an object and parameter based representation of the visual image and to convert  
said object and parameter based representation into an output data format suitable for driving  
25 a particular output device.

7. A system according to claim 5, wherein said shape processing module processes said  
objects on the basis of a boundary box defining the boundary of an object, a shape defining

the actual shape of the object bounded by the boundary box, the data content of the object and the transparency of the object.

8. A system according to claim 5, wherein said shape processor is adapted to apply grey-scale anti-aliasing to the edges of said objects.

5 9. A system according to claim 5, wherein said shape processing module has a pipeline architecture.

10. A system according to claim 1, wherein said internal representation includes object parameters having dimensional, physical and temporal parameters.

11. A system according to claim 1, further including a chrominance/luminance-based  
10 colour model to describe colour data.

12. A graphical user interface for a data processing system in which interactive visual displays employed by the user interface are generated by means of a digital document processing system as claimed in Claim 1.

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